

Derev 55/88

# Work Order ID 53342

November 2, 2009 8:09:31 AM



Page 1

Item ID: D212-664-207

Accept



Setup Start



Revision ID: A

Stop



Item Name: Crosstube Low Standard Aft

Start Date: 02/11/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 10/11/2009 Req'd Qty: 1.00

Customer:

Reference:

Approvals: Process Plan: PS Date: 09-10-2 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D212-664-247	Rev A

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile and create labels as per PPP D212-664-207 CHG001

Scobolot

for BG 10/01/07

110

0.00



Pick Kit

Packaging

Memo

0.00

Packaging

Packaging

10-1-8

120

0.00



BENDING MACHINE - CROSSTUBES

Memo

0.00

CNC Bend 2

CNC Alpha 160 Bender

Bend tube as per Dwg D212-664-247 using CNC bender program and Folio FT

IX MS 02-12-14



# Work Order ID 53342

November 2, 2009 8:09:31 AM

Page 2

Item ID: D212-664-207

Revision ID: A

Item Name: Crosstube Low Standard Aft

Start Date: 02/11/2009 Start Qty: 1.00

Required Date: 10/11/2009 Req'd Qty: 1.00

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start  
Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 QC Quality Control	QC15- Crosstube Dimensional Check  Memo	0.00 0.00	27 809/12/14						
140 Crosstubes Crosstubes	Crosstubes  Memo	0.00 0.00	MS 09-12-15						
1-Drill Rivet holes as per Dwg D212-664-247 using DT8972.			AWM 9-12-28						
2-Drill pilot holes in tube as per Dwg D212-664-247 using DT8550 and DT8551			MS 09-12-15						
3-Ream hole to finish size in tube as per Dwg D212-664-247									
4-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D212-664-247									
5-Scribe part # and batch # using vibrating stylus as per Dwg D212-664-247									



**Work Order ID 53342**

November 2, 2009 8:09:31 AM



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Item ID: D212-664-207

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Setup Start



Revision ID: A

Stop



Item Name: Crosstube Low Standard Aft

Start Date: 02/11/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 10/11/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180 	Outsource process - NDT per QSI038 4.1	0.00							
Outsource2	Memo	0.00							
Outsource process - NDT	Liquid Penetrant Inspection as per QSI 038 Issue P/O: <u>11012</u> LPI as per ASTM 1417 Level 2 Attach copy of NDT results to work order								
190 	Receive & Inspect for Damage & Mat'l Certs	0.00							
Packaging	Packaging								
Packaging	Memo	0.00							
Packaging	Ensure copy of NDT results attached to work order.								
200 	QC5- Inspect part completeness to step on W/O	0.00							
QC	Memo	0.00							
Quality Control	Inspect for damage & ensure results are as per Dwg D212-664-207								

C2 10/01/09 ①

10/02/09 ①

MA 10 01 04 ①

# Work Order ID 53342

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Item ID: D212-664-207

Accept



Setup Start



Revision ID: A

Stop



Item Name: Crosstube Low Standard Aft

Start Date: 02/11/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 10/11/2009 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210	Crosstubes	0.00							
	Crosstubes								
Crosstubes	Memo	0.00							
	1-Rivet Cuffs as per Dwg D212-664-247. with Sika flex in Between tube & Cuff								
	A/R SIKAFLEX -241/-291 BATCH: <u>112395</u>								
220	Spray Painting per QSI005 4.2	0.00							
	SprayPaint								
Spray Painting	Memo	0.00							
	1-Prime inside and outside crosstube as per QSI 005 4.2								
	2-Paint outside crosstube with White Imron as per QSI 005 4.2								
	PRIME:								
	Start Time: <u>8:30</u>								
	Fininsh Time: <u>9:30</u>								
	PAINT:								
	Start Time: <u>2:30</u>								
	Finish Time: <u>3:30</u>								

ml 10 01 04 ①

ml 10 01 05 ①

# Work Order ID 53342

November 2, 2009 8:09:31 AM



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Item ID: D212-664-207

Accept



Setup

Start



Revision ID: A

Stop



Item Name: Crosstube Low Standard Aft

Start Date: 02/11/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 10/11/2009 Req'd Qty: 1.00

Customer:

Reference:

Run

Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

230

QC14- Inspect Spray Paint

0.00



QC

Memo

0.00

Quality Control

Wrap in plastic bag to protect from scratches

25 10 01 -06

240

Crosstubes

0.00



Crosstubes

Memo

0.00

Crosstubes

1- Assemble as per Dwg D212-664-247

2- Lightly scuff the bonded area using a 320 grit sand paper and clean the area with 41058 wash 'n' wipe

3- Instal support with magnobond 6398 per dwg D212-664-247, cure for 12hrs before packaging.

Time & date of application: 12:45 10/01/06

Batch: 112417

EXP. DATE 01/2011

Torque: ml 10/01/07 ①

10 01 06 ①

**Work Order ID 53342**

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Item ID: D212-664-207

Accept



Setup Start



Revision ID: A

Stop



Item Name: Crosstube Low Standard Aft

Start Date: 02/11/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 10/11/2009 Req'd Qty: 1.00

Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
250  QC Quality Control	QC5- Inspect part completeness to step on W/O  Memo	0.00 ⇒ 8 10/01/09 0.00				(X)			
255  Packaging Packaging	Pick Kit  Memo	0.00 0.00				10-1-8			SL
260  QC Quality Control	QC4- 100% Inspect kits for completeness  Memo	0.00 ⇒ 8 10/01/09 0.00				(X)			



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Item ID: D212-664-207

Accept



Setup Start



Revision ID: A

Stop



Item Name: Crosstube Low Standard Aft

Start Date: 02/11/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 10/11/2009 Req'd Qty: 1.00

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
270		0.00	Rev A						
	Packaging								
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP D212-664-207								
280	QC21- Final Inspection - Work Order Release	0.00							
QC	Memo	0.00							
Quality Control									

10-1-8

SP (P)

10/01/11

P/10-1-08

(1)

# Picklist Print

November 2, 2009 8:09:36 AM

Page 1

Work Order ID: 53342

Parent Item: D212-664-207RevA

Parent Item Name: Crosstube Low Standard Aft

Comments:

Start Date: 02/11/2009

Required Date: 10/11/2009

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D212-664- 207TRNRevA		Manufactured	No			110	Each	6.0000	1.0000			



Crosstube Turning Detail



B-53254

MB 09-12-08

Warehouse  
Location

Loc Qty

Loc Code

Main Warehouse

FG

6

50678

1

50688

1

50879

1

50880

1

51377

1

51378

1

D3660-1RevB

Manufactured No

140

Each

9.0000

2.0000



CUFF



Warehouse  
Location

Loc Qty

Loc Code

Main Warehouse

ST

9

51394

9

MB 09-12-15

# Picklist Print

November 2, 2009 8:09:36 AM

Work Order ID: 53342

Parent Item: D212-664-207RevA

Parent Item Name: Crosstube Low Standard Aft


Comments:

Start Date: 02/11/2009

Required Date: 10/11/2009

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
CR3212-4-06		Purchased	No			220	Each	1,706.000	44.0000			
												
CHERRY RIVET												

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

1706

B:11234

107534

6

112492

200

112612

500

112724

200

112794

800

D3595-063-530RevA

Manufactured

No

240

Each

204.0000

4.0000



RUBBER CUSHION

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

204

40780

2

44998

2

50030

96

51776

104

# Picklist Print

November 2, 2009 8:09:36 AM

Work Order ID: 53342



Parent Item: D212-664-207RevA



Parent Item Name: Crosstube Low Standard Aft



Start Date: 02/11/2009

Required Date: 10/11/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2940-1RevB		Manufactured	No			240	Each	40.0000	2.0000			
												
Support												

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

40

24367

4

25594

2

45203

14

47748

20

*ml 10/01/06*

# Picklist Print

November 2, 2009 8:09:36 AM

Work Order ID: 53342

Parent Item: D212-664-207RevA

Parent Item Name: Crosstube Low Standard Aft



Comments:

Start Date: 02/11/2009

Required Date: 10/11/2009

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
MS21920-28 		Purchased	No			240	Each	170.0000	4.0000 			
Clamp(per MIL-DTL-8783C)												

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
OFFSHORE		
FG	5	
105884	5	
Main Warehouse		
ST	165	
106864	5	
108466	9	
108847	7	
109181	14	
109965	2	
111281	2	
111734	26	
112624	50	
112863	50	

*10 01 06*

D3428-1RevA

Manufactured No

255

Each

21.0000

1.0000  


Placard

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST096	21	
50790	21	

*10-1-8* *SP*

# Picklist Print

November 2, 2009 8:09:36 AM

Work Order ID: 53342

Parent Item: D212-664-207RevA

Parent Item Name: Crosstube Low Standard Aft


Comments:

Start Date: 02/11/2009

Required Date: 10/11/2009

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
MS21042L6  Nut		Purchased	No			255	Each	623.0000	6.0000			

10-1-8 SP

Warehouse  
Location

Loc Qty

Loc Code

Main Warehouse

ST

623

105077

22

110002

5

111548

8

111578

400

112492

188

AN960JD616

Purchased

No

255

Each

798.0000

18.0000



Washer

10-1-8 SP 12

Warehouse  
Location

Loc Qty

Loc Code

Main Warehouse

ST

798

112314

298

112828

500

18

# Picklist Print

Page 6

November 2, 2009 8:09:36 AM

Work Order ID: 53342

Parent Item: D212-664-207RevA

Parent Item Name: Crosstube Low Standard Aft

Comments:

Start Date: 02/11/2009

Required Date: 10/11/2009

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN6-40A Bolt		Purchased	No			255	Each	108.0000	4.0000			

Warehouse                      Loc Qty                      Loc Code  
Location

Main Warehouse

ST    108

112612    8

112679    50

112828    50

10-1-8                      SP

AN6-41A  
Bolt

Purchased                      No

255                      Each                      70.0000                      2.0000

Warehouse                      Loc Qty                      Loc Code  
Location

Main Warehouse

ST    70

111605    25

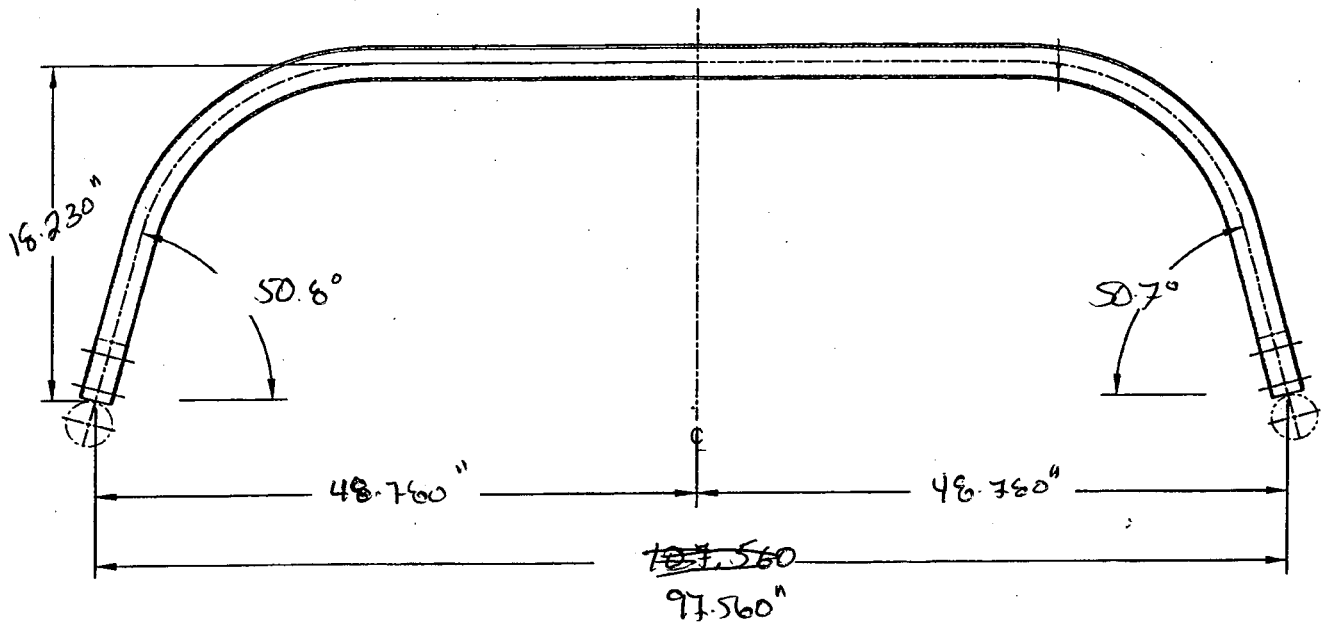
112489    20

112805    25

10-1-8                      SP

DART AEROSPACE LTD		Work Order:	53348
Description: Crosstube Low Aft (205/212)		Part Number:	D212-664-207
Inspection Dwg: D212-664-247 Rev: A		Page 1 of 1	

Required Dimension	Min	Max
Height	18.16	18.42
1/2 Span	48.55	48.81
Angle	49	52
Total Span	97.1	97.62

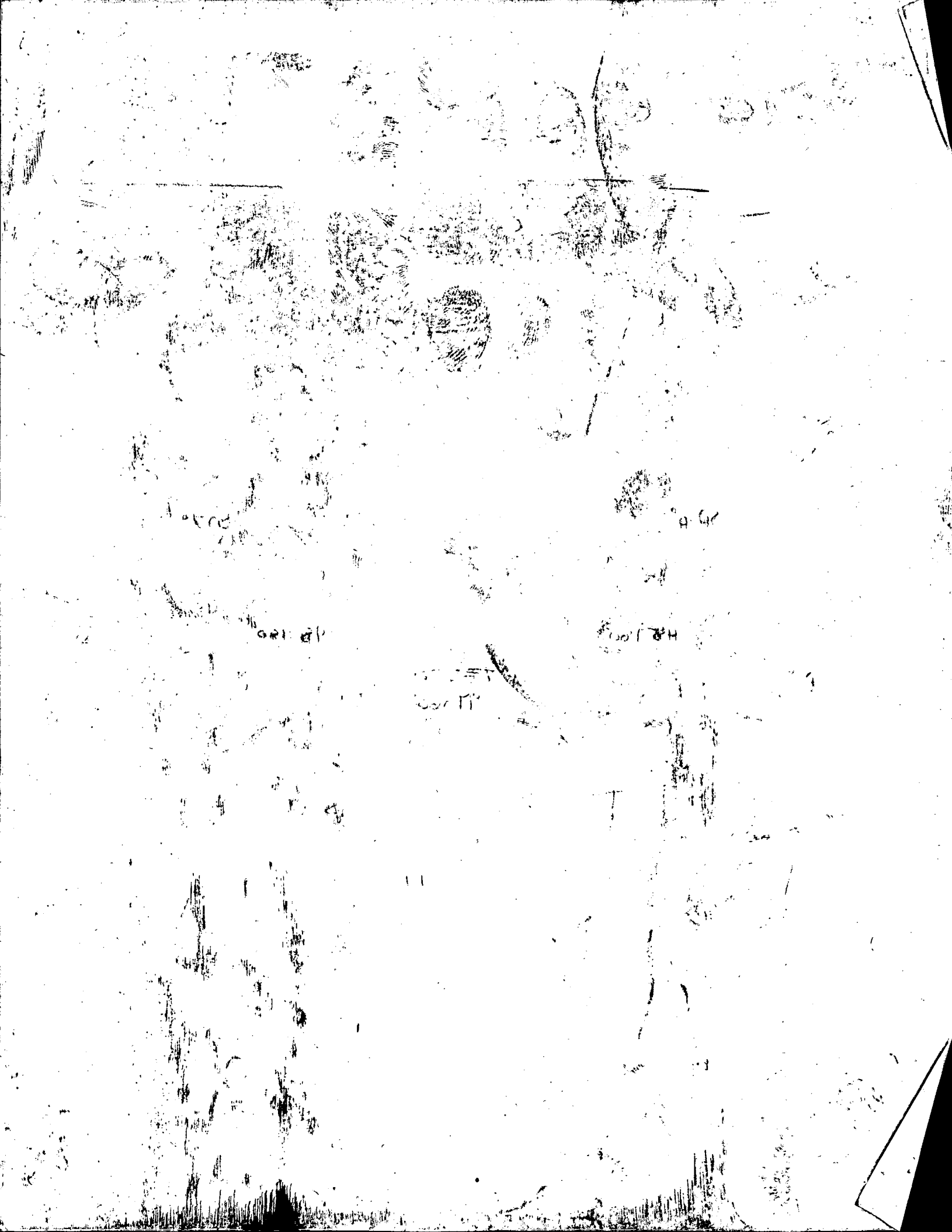


Comments

QC15 Inspection	S
Date	09/12/14

Rev	Date	Change	Revised by	Approved
A	08.02.29	New Issue	KJ/JM	<i>[Signature]</i>





**PARTS LIST:**

Qty	Part Number	Description
X	D212-664-247	CROSSTUBE ASSEMBLY (205/212 LOW AFT)
1	D6008-132	CROSSTUBE
2	D2940-1	SUPPORT
4	D3595-063-530	RUBBER CUSHION
2	D3660-1	CUFF
4	MS21920-28	CLAMP (OR MS21920-30)
44	CR3212-4-06	RIVET (OR M7885/3-4-06)
A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)
A/R	SIKAFLEX-241/-291	SEALANT (OR PROSEAL 890 OR MIL-S-8802 CLASS B2 SEALANT)

**GENERAL NOTES:**


- 1) MATERIAL: MANUFACTURED FROM D6008-132.  
FINISHED LENGTH = 128.27±0.020 (BEFORE BENDING/TRIMMING)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2  
PAINT OUTSIDE PER DART 005 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) ALL DIMENSIONS ARE IN INCHES.
- 5) PART IS SYMMETRIC ABOUT CENTERLINE.
- 6) WHEN MACHINING TAPER, RUN-OFF PART AT STOCK. BLEND OUT EDGE LONGITUDINALLY.  
TRANSITION SHOULD BE SMOOTH.
- 7) BEND PROGRESSIVELY WITH A MINIMUM OF 8 PASSES. MAXIMUM TUBE FLATTENING DUE  
TO BENDING IS 6% BASED ON O.D., EXCEPT UP TO 10% IS ALLOWED IN AREA NOTED.
- 8) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 9) SCRIBE DART PART NUMBER AND BATCH NUMBER ON INNER SURFACE OF TUBE WITH A  
VIBRATING STYLUS.
- 10) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE  
OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS  
SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT  
LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 11) APPLY A 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 TO THE SURFACE OF D2940-1  
THAT WILL BE IN CONTACT WITH THE CROSSTUBE. LET CURE FOR 12 HOURS AFTER  
INSTALLATION AND PRIOR TO PACKAGING.
- 12) INSTALL MS21920-28 CLAMPS (OR -30) WITH D3595-063-530 RUBBER CUSHIONS TO SECURE  
D2940-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE OPPOSITE  
CROSSTUBE SUPPORT.
- 13) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY  
AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.
- 14) INSTALL D3660-1 CUFF AFTER CHEMICAL CONVERSION COAT BUT BEFORE PAINT, WITH A  
LAYER OF SIKAFLEX-241/-291 OR PROSEAL 890 OR MIL-S-8802 CLASS B2 SEALANT BETWEEN  
CUFF AND CROSSTUBE. SEAL EDGE OF CUFF TO ENSURE NO GAPS.
- 15) TOUCH-UP HOLES WITH CHEMICAL CONVERSION COAT.

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WORK ORDER  
NO. 53342

Pl 09-11-2

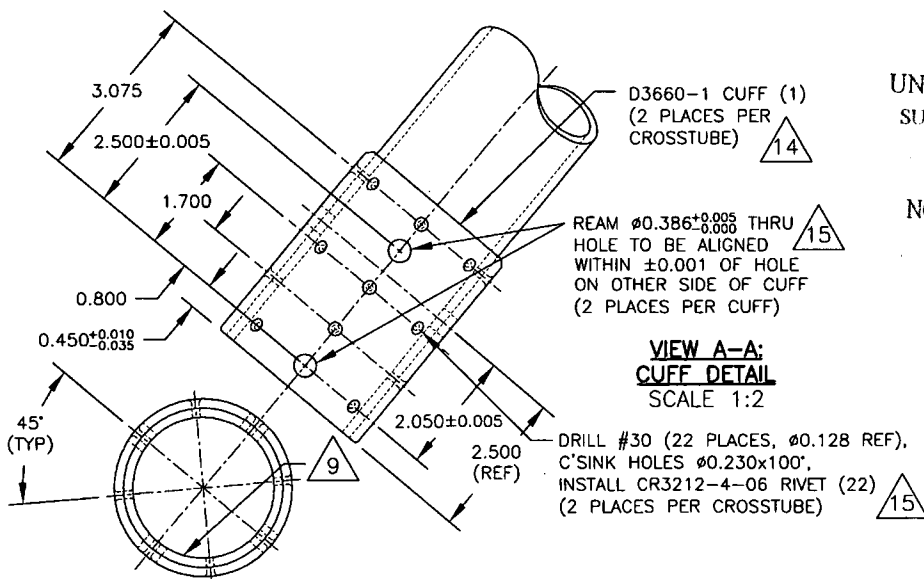
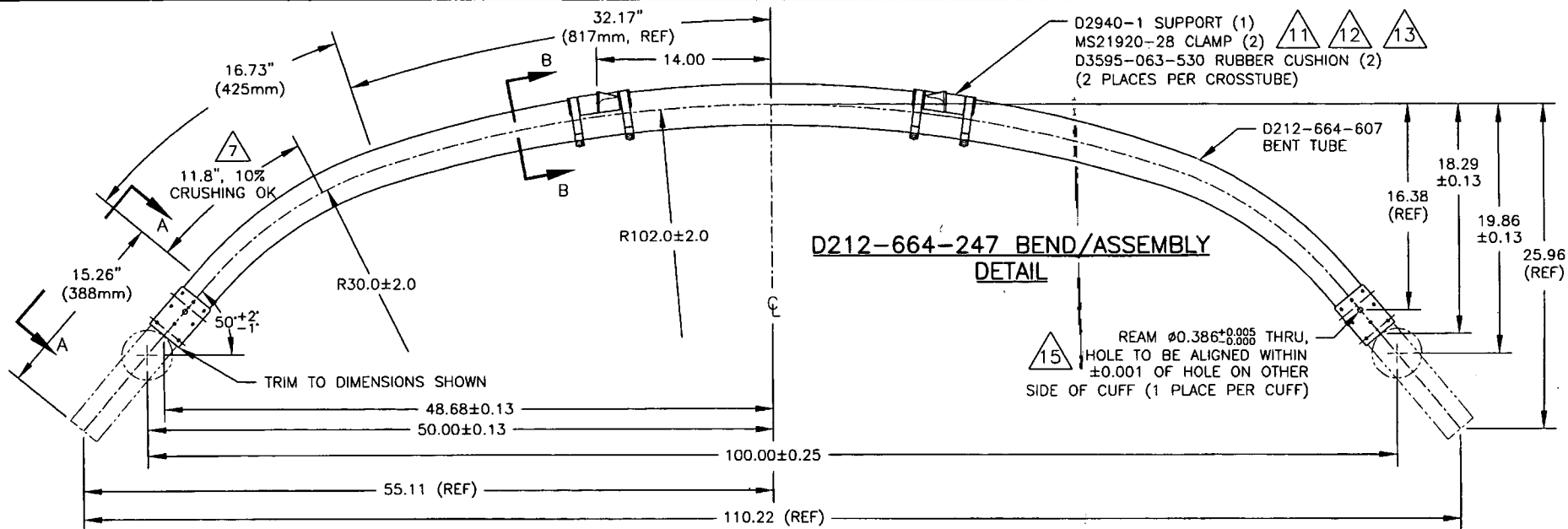
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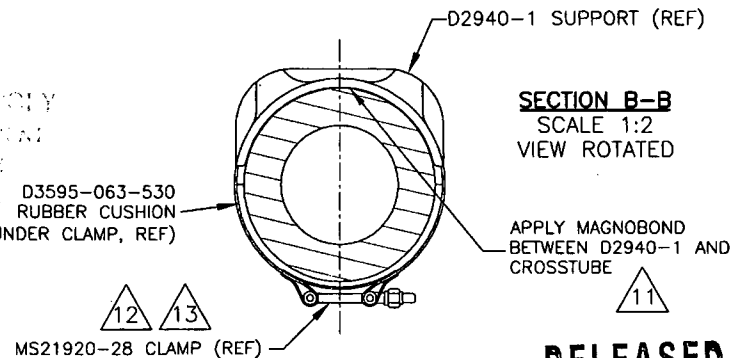
A		07.07.07	NEW ISSUE	
DESIGN	qp	DRAWN BY	qp	 <b>DART AEROSPACE LTD.</b> <small>HAWKESBURY, ONTARIO, CANADA</small>
CHECKED	ph	APPROVED	ph	
DATE		07.07.07		DRAWING NO. D212-664-247
TITLE		CROSSTUBE (205/212 LOW AFT)		REV. A SHEET 1 OF 3 SCALE NTS

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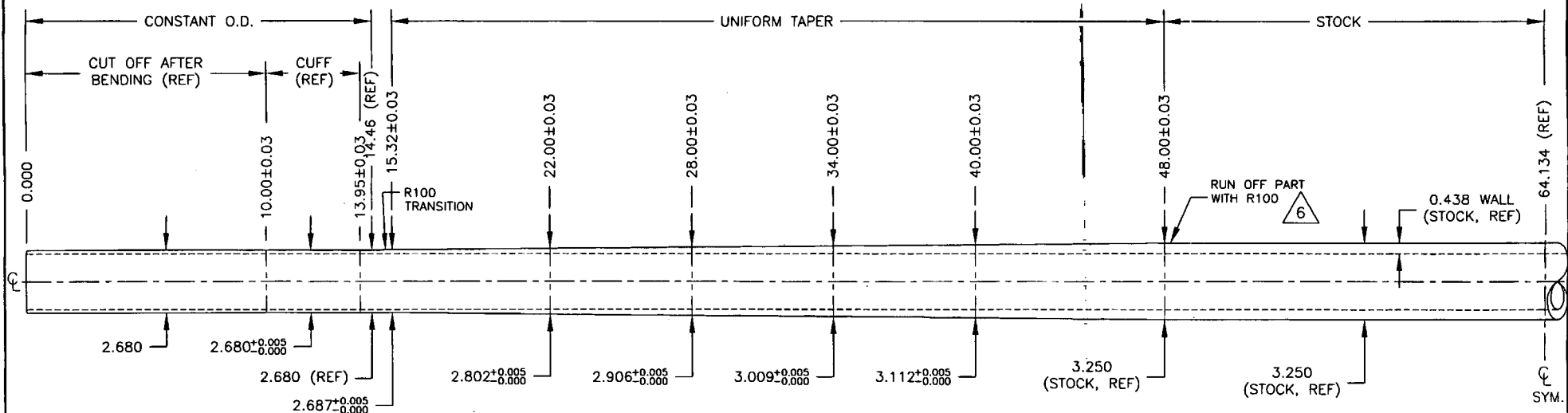


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DESIGN	GP	DRAWN BY	GP	<b>DART</b>	DART AEROSPACE LTD. HAWKESBURY, ONTARIO, CANADA
CHECKED	RA	APPROVED	GP	DRAWING NO.	D212-664-247
DATE	07.07.07	TITLE	CROSSTUBE (205/212 LOW AFT)	REV. A	SHEET 2 OF 3
		SCALE	1:8		



# D212-664-247 MACHINING DETAIL

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WORK IN PROGRESS  
NO. 533412

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07-04-24  
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		DATE		DRAWING NO.	REV. A
		07.07.07		D212-664-247	SHEET 3 OF 3
				TITLE	SCALE
				CROSSTUBE (205/212 LOW AFT)	1:4

DRAWING NO. D212-664-247	TITLE CROSSTUBE	REV. A	DART AEROSPACE LTD ENGINEERING ORDER		D.E.O. NO. D212-664-247-A-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>UP</i>	CHECKED <i>PR</i>	MFG. APPR. <i>AL</i>	APPROVED <i>AND</i>		DE APPR. <i>H</i>		
DATE 09.05.01	DATE 09.06.15	DATE 09/06/22	DATE 09/06/22		DATE 09.06.22		

**CHANGE:**

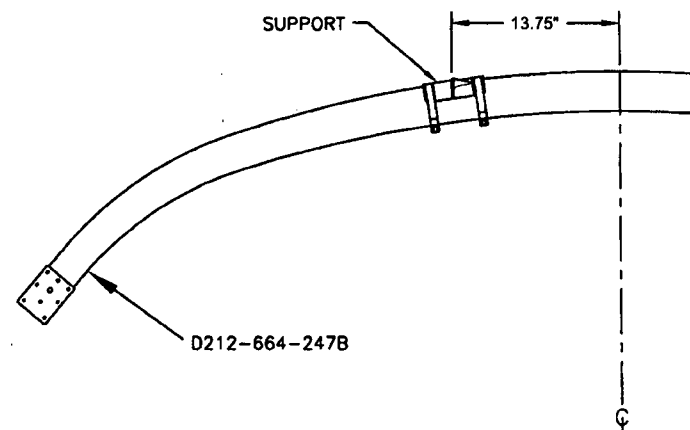
ADD THE FOLLOWING CROSSTUBE ASSEMBLY:

Part Number	Description
D212-664-247B	CROSSTUBE ASSEMBLY (214 LOW AFT)

THE D212-664-247B CROSSTUBE HAS THE SAME PARTS LIST AS THE D212-664-247 CROSSTUBE. HOWEVER, INSTALL THE SUPPORTS AS SHOWN IN FIGURE 1 OF THIS ENGINEERING ORDER. THE NEW KIT IS OTHERWISE ASSEMBLED PER THE D212-664-247 CROSSTUBE.

**RELEASED**  
*09/06/22*

SHOP COPY  
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ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO APPROVAL  
WITHOUT THE  
WORK ORDER  
NO. *5334/2*



**FIGURE 1 - SUPPORT INSTALLATION**



## LIQUID PENETRANT TEST REPORT

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PAGE 1 OF

CLIENT DAT Aerospace DATE DEC 29 - 2003 TIME AM ☒ P  
ATTENTION LINDA / KANTAL ACUREN JOB NO. 185-09-001085  
ADDRESS 1270 ABELDEEN ST POWO NO. 11012  
HAWKESBURY ON. WORK LOCATION SAME  
K&H 1K7 ACCEPTANCE STD. ASTM 1417 REV./DATE 2003  
PROJECT F.P.I. ON CROSS TUBES AND MACHINED PARTS  
ITEM(S) EXAMINED 4 CROSS TUBES  
11 MACHINED - STUDS. 2 COLLECTIVE BELL CRANK-W.C. 533

JOB DESCRIPTION PROCEDURE NO. LT0002 REV./DATE TECHNIQUE NO. LT0002 REV./DATE  
PART NO. - S/STEEL MATERIAL ALUMINUM THICKNESS -VAR  
SCOPE WET FLUORESCENT LIQUID PENETRANT  
INSPECTION CARRIED OUT 100% EXTERNAL

## TEST DETAILS

METHOD ☒ FLUORESCENT ☐ VISIBLE ☒ WATER WASH 10454 ☐ SOLVENT REMOVABLE ☐ POST EMUL  
FAMILY BRAND MAGNAFLUX BLACK LIGHT S/N 4 ☐ OUTPUT > 1000  $\mu$ W/cm<sup>2</sup> ☐ AMBIENT <  
PENETRANT 2L67 MINIMUM DWELL TIME 45 MIN. LIGHTING EQUIP. ☐ FLASHLIGHT ☐ TROUBLELIGHT ☐ OUTPUT > 100 fc @ 5  
PENETRANT REMOVER H-20 MINIMUM DRY TIME >10 MIN. OTHER CASINO  
DEVELOPER SKD 52 MINIMUM DWELL TIME 10 MIN. LIGHT METER S/N 1098866 CAL DUE DATE 12-1  
DEVELOPER TYPE ☒ NON AQUEOUS ☐ AQUEOUS ☐ DRY

## TEST SURFACE

SURFACE CONDITION ☐ AS GROUND ☐ AS WELDED ☒ MACHINED ☐ SHOT BLASTED ☐ CLEAN BARE ME  
SURFACE TEMPERATURE ☐ < -4°C/ 20°F ☐ -4°C/ 20°F TO 10°C/50°F ☒ 10°C/50°F TO 52°C/125°F ☐ > 52°C/125°F

RESULTS- (☐ METRIC ☒ IMPERIAL)

1	CROSSTUBE-W.O. 53341	✓
1	CROSSTUBE-W.O. 53342	✓
1	CROSSTUBE-W.O. 54504	✓
1	CROSSTUBE-W.O. 54503	✓
11	STUDS -W.O. 50932	✓
2	COLLECTIVE BELL CRANK W.O. 53635	✓

*mt 10/01/04*

## Scope of Services

The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as well as data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.

## Standard of Care

In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, express or implied, is made or intended by Acuren Group Inc.

## SIGNATURES

CLIENT REPRESENTATIVE Linda Kantal DTR # E-27641  
TECHNICIAN (SIGNATURE): [Signature] SIGNATURE  
NAME (PRINT): Mike Johnson REPORT REVIEWED BY:  
1<sup>ST</sup> TECHNICIAN 2<sup>ND</sup> TECHNICIAN  
CGSB LEVEL 1 SNT LEVEL 1 CGSB LEVEL 1 SNT LEVEL 1  
CGSB REG. No. 6066 CGSB REG. No. 6066